



MERIDIAN PRIMARY SCHOOL

Maths curriculum

2025

At Meridian, pupils are encouraged to explore new ideas with curiosity, persevere with resilience when faced with challenge, and show kindness and respect as they learn alongside others within a strong, supportive community. These values shape the way our children grow into mathematicians who are thoughtful, adaptable, and determined.

Through a carefully sequenced curriculum that continually revisits and consolidates key knowledge, pupils build a secure and deep understanding of mathematics and make meaningful connections between ideas. As they progress, they become increasingly fluent in the fundamentals, able to reason with confidence, and equipped to solve progressively complex problems with creativity, perseverance, and independence

Our mathematicians in Reception should...			
Autumn		Spring	Summer
Curriculum	Number	- Compare numbers using vocabulary including 'more than', 'less than', 'fewer', 'the same as' and 'equal to' - Can identify 1 more or 1 less than number to 10 - Recognise and use + - = symbols - Recognise and use part-part whole - Use language related to addition: addend, sum/total - Use language related to subtraction: minuend, subtrahend, difference - Distribute items equally e.g. put 3 cakes on each plate - Understand the 'one more than/one less than' relationship between consecutive numbers - Automatically recall some double facts to 10 - Write numerals 0-10 - Recognise 10p	- Have a deep understanding of number to 10, including the composition of each number - Subitise (recognise quantities without counting) up to 5; - Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double and half facts. - Estimate how many objects are in a group - Automatically recall subtraction facts to 5 - Automatically recall some half facts - Introduce 'times' vocabulary i.e. jump 3 times, clap 5 times
	Numerical Patterns	- Verbally count beyond 10 - Explore the composition of numbers to 10 - Explore number bonds for numbers 0-10 - Count in 2s up to 10 and understand this pattern - Understand grouping and sharing equally and represent these with manipulatives or pictures	- Verbally count beyond 20, recognising the pattern of the counting system - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally
	Spatial Awareness	- Select, rotate and manipulate shapes in order to develop spatial reasoning skills - Compose and decompose shapes recognising that shapes can have other shapes within them just as number can - Identify common 2D shapes: square, circle, triangle, rectangle - Describe the properties of these shapes: sides, corners, curved, straight	- Identify common 3D shapes: cube, sphere and cylinder - Show intentionality in selecting shapes for a purpose, such as cylinders to roll - Make a range of constructions, including enclosures and talk about the decision they have made - Explore, create and discuss maps of small and large areas - See shapes (both 2D and 3D) in different orientations and recognise that they are still that shape - Recognise a range of triangles and say how they know what they are - Explain whether a circular pattern is continuous or not - Use positional vocabulary, including relative terms, to describe where things are in small-world play; including 'under, on top, next to, behind, in front'

Vocabulary

addition and subtraction

Add, more, plus, and
Make, total,
altogether, equals
Double
1 / 2 more/less
How many more to make..?
How many more is ... than...?
Take away
How many are left?
How much fewer is...than...?
Difference between
Number bonds
Part whole
Count on/ back

division

Sharing
Doubling
Halving
Number patterns

fractions

Parts of
Whole
Half
Quarter
pieces

geometry- position, direction and movement

Position:

Over, under
Above, below
Top, bottom, side
On, in
Outside, inside
Around
In front, behind
Front, back
Beside, next to
Opposite
Apart
Between
Middle
edge
Corner

Direction:

Left, right
Up, down

Forwards, backwards, sideways
Across, Next to, close to, near, far
Along, Through
To, from, towards, away from
Movement:
Slide, roll, turn
Stretch, bend
Whole turn, half turn
Diagonal

geometry- properties of shape

Shape:

Pattern
Flat
Curved/straight
Round
Hollow/solid
Sort
Make, build, draw
Size:
Bigger, larger, smaller
Symmetrical Pattern, repeating pattern
Match

2D shape

Corner
Side
Rectangle (including square)
Circle
Triangle

3D shape

Face, edge, vertex, vertices
Cube
Cuboid cylinder
Pyramid
Sphere
Cone

measurement

length, area and perimeter:

Metre
Length, height
width, depth
short, tall
High, low
Wide, narrow
Thick, thin
Longer, shorter, taller, higher
Longest, shortest, tallest, highest
Far, near, close
Further, furthest

multiplication

Groups of
Lots of

number and place value

Number:

Numerals to 10 /20
Zero
one, two, three...to twenty and beyond
teens numbers, eleven, twelve to...twenty
how many...?
Count, count (up) to, count on (from to)
count forwards
Count back (from to) / count backwards
Count in ones, twos, fives and tens,
Is the same as...
More /more than less / less than
Odd, even
Few
pattern
pair
5 / 10 frame
1 more/1 less
Altogether

Place value:

Digit
Ones, Tens
5 frame
10 frame
The same as
As many as
Fewer, fewest
Smaller, smallest
Less, least
One more/less Compare
Order
Before, after
Next, between
Part whole
1st-5th

money

Money
Coin
Penny
Pence
Pound
Price
Cost
Buy
Sell
Spend
Spent
Pay

statistics

Count
Sort
Group
Set
List
Vote

time

day, week, month, year
days of the week
birthday, holiday
morning, afternoon, evening, night
bedtime, dinnertime, playtime, lunchtime
today, yesterday, tomorrow
before, after next, last
now, soon, early earlier late later
quick, quicker, quickest, quickly
slow slower slowest slowly
old, older, oldest
new, newer, newest
takes longer/takes less time
hour, minute
o'clock
clock, watch, hands
Autumn, Summer, Winter, Spring
sand timer
1 minute

Year groups will revisit previous vocabulary where necessary

Our Year 1 mathematicians should...		
Autumn	Spring	Summer
Number and Place Value - Count to 50, forward and backward, beginning with 0, or from any given number - Read and write numbers to 20 in numerals - Recognise the place value (tens and ones) of each digit in a 2 digit number within 20 - Identify 1 more or 1 less than within 20 - Read and write numbers from 1-10 in words - Use the language of: equal to, more than, less than, most and least when comparing numbers - Identify and represent numbers using objects and pictorial representations including the numberline Addition and Subtraction - Read, write and interpret equations containing +, - and = symbols and relate additive expressions and equations to real-life contexts - Compose numbers to 10 from 2 parts and partition numbers to 10 into parts, including recognizing odd and even numbers - Compare addition and subtraction statements Multiplication and Division - Begin to unitise e.g. 1 pot of 10 pencils, 1 mat of 4 pupils - Count in multiples of 2 to 50 - Count up in multiples of 10 to 120 in order Fractions - Recognise, find and name a half as one of two equal parts of an object or shape Geometry - Identify, name and describe common 2D shapes: square, circle, triangle, rectangle, pentagon, hexagon	Number and Place Value - Count to 100, forward and backward, beginning with 0, or from any given number - Read and write numbers to 50 in numerals - Recognise the place value (tens and ones) of each digit in a 2 digit number to 50 - Identify 1 more or 1 less than within 50 - Read and write numbers from 1-20 in words and numerals - Identify odd and even numbers - Identify and represent numbers using objects and pictorial representations including the numberline Addition and Subtraction - Develop fluency in addition and subtraction facts within 10 - Solve one step problems involving addition and subtraction, using concrete objects and pictorial representations and missing number problems Multiplication and Division - Unitise by working with numbers as units or groups for 2 and 10 times table - Count in multiples of 2s and 10s to 50 - Unitise 2s and 10s, understanding place value system - Identify unit size and number of units e.g. 2 apples in a bag and there are 4 bags. - Count in multiples of 5 up to 60 Fractions - Recognise, find and name a half as one of two equal parts of an object, shape or quantity - Recognise, find and name a quarter of an object Measurement - Compare, describe and solve practical problems for lengths and heights: non-standard units and cm - Compare, describe and solve problems for mass: non-standard units - Read a simple scale: ruler, weighing scale, measuring jug - Compare, describe and solve problems for capacity and volume: non-standard unit Geometry - Identify and name common 3D shapes: cube, cuboid, sphere, cylinder, pyramid	Number and Place Value - Count to and across 100, forward and backward, beginning with 0, or from any given number - Read and write numbers to 100 in numerals - Recognise the place value (tens and ones) of each digit in a 2 digit number to within 100 - Identify 1 more or 1 less than within 100 - Identify and represent numbers using objects and pictorial representations including the numberline Addition and Subtraction - Represent and use number bonds and related subtraction facts within 20 - Add and subtract 1-digit and 2-digit numbers to 20 - Solve one step problems involving addition and subtraction, using concrete objects and pictorial representations and missing number problems such as $7 = __ - 9$ Multiplication and Division - Unitise by working with numbers as units or groups for 0 and 1 times table - Count in multiples of 2s, 5s and 10s to 100 - Demonstrate multiplicative reasoning for 2, 5 and 10 tables, grouping objects and connecting this to real-life scenarios. - Solve one step problems involving multiplication and division, by calculating using concrete objects, pictorial representations and arrays Fractions - Recognise, find and name a quarter of an object or group of objects, shape or quantity Position and Direction - Describe position, direction and movement including half, quarter and three quarter turns, first, second, in front, under, etc. - Identify right and left turns Measurement - Recognise and know the value of different denominations of coins and notes - Sequence events in chronological order using language: before, after, today, yesterday, morning, etc. - Recognise and use language relating to dates, including days of the week, weeks, months and years - Tell the time using o'clock and half past

Vocabulary

addition and subtraction

number sentence
part-part whole
number bond diagram
plus sign +
add/addition
equals sign =
addition equation
addition fact
greater number
in total
addition fact family
counting on
greater/ greatest
make 10
minus sign –
subtract
subtraction equation
subtraction fact family
first, then, now

division

groups
equal
equal groups
divide
share
share equally

fractions

half /halves
quarter(s)
equal parts
whole
share equally

geometry- position, direction and movement

position words- 10th 1st-10th
before, after last
left, right
between / next to
top, middle, bottom
position: above, below, behind, in front of, to the left of, to the right of
far from
ground floor, first floor...top floor
up, down, forwards, backwards
outside, inside
whole / half turn/quarter turn/three-quarter turn
direction, clockwise, anti-clockwise

geometry- properties of shape

rectangle
square
circle
triangle
cuboid
cube
cone
sphere
pyramid
cylinder
2d, 3d shape
solid object
corners
sides
pattern

measurement

long(er)
short(er)
tall/short
double/half
length
longest
measure, measuring
width, wide
unit, units
centimetres

money

coins, notes
pounds
pence
pound coin
penny coin
value

multiplication

equal groups
equal
groups
twos
fives
tens
row
array
double
twice the amount
ten frame
total

number and place value

equal to
more than / less than
fewer
most / least place value
digit
2 digit number
numerals to 100
words to 40
take away
as many as
tens /ones
great/greater
smaller/smallest
number bond
making 10
count on from 10
total
increasing/decreasing
100 square

statistics

bar model (*revisit prior vocabulary where necessary*)

time

quicker/slower
earlier/later
days of the week
months of the year
week/month/year
o'clock /half past
hour/minute/second
before/after
first / next
today /yesterday
tomorrow
morning
afternoon
evening

Year groups will revisit previous vocabulary where necessary

Our Year 2 mathematicians should...

Autumn	Spring	Summer
Number and Place Value - Count in steps of 2 and 5 from 0, and in tens from any given number, forward and backward - Read and write numbers to 100 in numerals and words - Compare and order numbers from 0 up to 50 and use < > and = signs - Recognise the place value (tens and ones) of each digit in all 2 digit numbers Addition and Subtraction - Secure fluency in addition and subtraction facts within 10 - Add and subtract across 10 - Add and subtract within 100 by applying related one-digit and subtraction facts: add and subtraction only ones or only tens to/from a two-digit number and add three 1-digit numbers - Know that addition of two numbers is commutative and subtraction is not Multiplication and Division - Demonstrate multiplicative reasoning for 2s, 5s, 10s, including recognising odd and even numbers up to 12x - Recall multiples of 10 up to 12 x 10 in any order - Use x and ÷ symbols - Unitise by working with numbers as units or groups. Use vocabulary of 'unit size' and 'number of units' when appropriate. - Understand commutative law for multiplication Fractions - Recognise, find, name and write fractions of half, a quarter and a third of a shape or set of objects. Geometry - Identify and describe the properties of 2D shapes including the number of sides and lines of symmetry Measurement - Compare and order lengths and mass and record the results using > < = - Compare and order volume/capacity and record the results using > < = - Choose and use appropriate standard units to estimate and measure: length/height cm/m, mass kg/g, temperature °C, capacity l/ml using rulers, scales, thermometers and measuring vessels	Number and Place Value - Count in steps of 2, 3 and 5 from 0, and in tens from any given number, forward - Compare and order numbers from 0 up to 100 and use < > and = signs Addition and Subtraction - Recall and use addition and subtraction facts to 20 and derive related facts up to 100 - Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers - Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. Multiplication and Division - Demonstrate multiplicative reasoning for 2s, 5s, 10s using real-life examples - Recognise that division is the inverse of multiplication and use this to check calculations Fractions - Recognise, find, name and write fractions of half, a quarter and a third of a shape, length, set of objects or quantity. - Recognise, find, name and write fractions three quarters of a shape, set of objects or quantity. Measurement - Recognise and use symbols for pounds (£) and pence (p) - Combine amounts of money to make particular values - Solve simple problems in a practical context involving addition and subtraction of money of the same unit – including giving change Geometry - Identify and describe the properties of 3D shapes including the number of edges, vertices and faces - Identify 2D shapes on the surface of 3D shapes	Number and Place Value - Count in steps of 2, 3 and 5 from 0, and in tens from any given number, forward and backward - Compare and order numbers from 0 up to 100 and use < > and = signs Addition and Subtraction - Solve problems with addition and subtraction using concrete and pictorial representations, including those involving quantities and measures - Apply their increasing knowledge of mental and written methods Multiplication and Division - Recall and use multiplication and division facts for the 2, 5, 10, 11, 3 and 4 times tables - Use multiplicative reasoning to identify missing facts - Solve one step problems involving multiplication and division (2,5,10,3 and 4 times tables) by calculating using concrete objects, pictorial representations and arrays Fractions - Write simple fractions e.g $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ Position and Direction - Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line distinguishing between rotation as a turn and in terms of right angles for quarter, half and three quarter turns (clockwise and anti-clockwise) Measurement - Tell, draw (the hands) and write the time: quarter to and quarter past the hour, and all times to 5 minutes - Compare and sequence intervals of time Statistics - Interpret and construct pictograms, tally charts, block diagrams and simple tables - Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity - Ask and answer questions about totaling and compare categorical data Geometry - Order and arrange combinations of mathematical objects in patterns and sequences

Vocabulary

addition and subtraction

add the ones
add the tens
column
column method
rename 10 ones as 1 ten
rename 1 ten as 10 ones
subtract the 1's/10's
number line
partitioning
difference

division

groups of
grouping
how many groups?
how many in each group?
division equation
groups of 2
2 equal groups
5 equal groups
10 equal groups
division facts
fact family

fractions

two quarters
three quarters
third
one half
one quarter
numerator
denominator
unit fraction

geometry- position, direction and movement

clockwise
anti-clockwise
quarter turn
half turn
three- quarter turn
right angle turn
(revisit prior vocabulary where necessary)

geometry- properties of shape

line symmetry
vertical line
edges
faces
vertices

measurement

metre/s m
centimetre/s cm
unit
longer/longest
shorter, shortest
greater than/less than
estimate
sum
wide/width
length
total

money

£ / p
note, coin
amount
more / greater
equal
how much money?
fewer / less
count/ count on
enough
correct
equal/same
total/ total cost
value
compare
costs
arrange/ order
least
buy/ pay
change/ left
spent / spend
more than/less than
altogether
share
equally

multiplication

groups of
times
equals, equal to
multiply
multiplication sign x
altogether
how many groups?
how many in each group?
counting in 2's
equation
groups of
counting in 5's
counting in 10's
multiplication equation
multiplication fact family
multiplication fact

number and place value

numerals and words to 100
number bond diagram
number line
greater/greatest
2, 3, 5, 10 more / less
100 square
groups of
place value table

statistics

pictogram
tally chart
block diagram
table

time

quarter past/to
5 minutes past/10 minutes past...
25 minutes to/20 minutes to...

Year groups will revisit previous vocabulary where necessary

Our Year 3 mathematicians should....		
Autumn	Spring	Summer
Number and Place Value - Count from 0 in multiples of 4, 50 and 100 - Find 10 or 100 more or less than any given number - Recognise the place value (ones, tens and hundreds) of each digit in a 3-digit number Addition and Subtraction - Add and subtract numbers mentally using their number bond knowledge - Add and subtract numbers mentally including 3-digit number and ones, 3-digit number and tens, 3-digit number and hundreds. - Add and subtract numbers with up to 3-digits using formal written column methods - Use the inverse to check calculations Multiplication and Division - Count in multiples of 3 up to 12×3 in any order - Count in multiples of 4 up to 12×4 in any order - Begin to count in multiples of 8 to 12×8 Fractions - Recognise unit and non-unit fractions - Compare and order unit fractions, and fractions with the same denominators - Add and subtract fractions with the same denominator within one whole Geometry - Make 3D shapes using modelling materials - Recognise 3D shapes in different orientations and describe them	Number and Place Value - Count from 0 in multiples of 4, 8, 50 and 100 - Compare and order numbers to 1000 Addition and Subtraction - Add and subtract numbers mentally using compensation and redistribution - Add and subtract measures (length, mass, volume, money) with up to 3-digits using formal column methods Multiplication and Division - Recall and use multiplication and division facts for the 3, 4 and 8 tables - Write and calculate multiplication and division problems mentally using known X Tables and using formal methods, including 2-digit X 1-digit Fractions - Recognise, find and write fractions of a discrete set of objects; unit fractions and non-unit fractions - Recognise and show, using diagrams, equivalent fractions with small denominators Measurement - Measure the perimeter of simple 2D shapes - Add and subtract amounts of money to give change, using both £ and p in practical contexts Statistics - Interpret and present data using bar charts, pictograms and tables - Solve 1-step and 2-step questions such as: 'How many more? How many fewer?' using information presented in scaled bar charts, pictograms and other graphs. Geometry - Draw 2D shapes - Recognise angles are a property of shape or a description of a turn	Number and Place Value - Read and write numbers to 1000 in numerals and words Addition and Subtraction - Solve word problems including missing number problems, number facts, place value and more complex addition and subtraction Multiplication and Division - Calculate multiplication and division problems including use of money and length - Begin to count up in 6s to 12x Fractions - Count up and down in tenths and recognise that tenths arise from dividing an object, number or quantity into ten equal parts Geometry - Identify right angles, recognise that two right angles make a half turn, three make three quarters and four a complete turn - Identify whether angles are greater than or less than a right angle - Identify horizontal and vertical lines and pairs of perpendicular and parallel lines Measurement - Estimate and read time to the nearest minute - Tell and write the time on an analogue clock including Roman numerals from I to XII - Measure, compare, add and subtract lengths (m, cm, mm), mass (kg, g), volume/capacity (l, ml) - Read 12 hour and 24 hour clocks - Record and compare time – seconds, minutes and hours - Use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight - Know the number of seconds in a minute and the number of days in each month, year and leap year - Compare durations of events – calculate the time taken by particular events or tasks

Vocabulary

addition and subtraction

sum
addend
subtrahend
difference
100 more/100 less
hundreds column
column addition
estimate
approximate
renaming 10 tens to 1 hundred
count back in 100's
bar model

division

3 equal groups
groups of 3
4 equal groups
groups of 4
divide into equal groups
number bond
rename 10 1's as 1 10
dividing 1's
dividing 10's
divisor
rename a 2 digit number as 10's and 1's

fractions

tenths
thirds → elevenths
whole number
set
part
division, divide
equivalent
greater (than) less (than)
smaller
< >
subtraction
left/remaining

geometry- position, direction and movement

straight line
angle
point
amount of turn
right angle
half turn, quarter turn, three quarters
clockwise/anti-clockwise
flip

geometry- properties of shape

angle
horizontal line/vertical line
perpendicular line
parallel faces
angle
right angle
straight line
point
two dimensional
three dimensional
acute angle
obtuse angle

measurement

millimetres mm
perimeter
length
centimetres
metres
measure
unit of measure
distance
converting m-cms
converting cms-m
units
estimate
mass

money

price
greater
column method
difference
more than
change
add
subtract
more
less

multiplication

addition
doubling
one group less/one group more
counting in 8's
twice as many
four times as many
counting in 20's
multiplying 1's / 10's
rename a 2-digit number as tens and ones
show 2-digit number base 10 materials number bonds
product
rename 10 as 1's
2 times as many
equal parts
1 unit

number and place value

10/100 more / less
words to 1000
hundreds / thousands
divided into equal parts
2 tiered part-whole diagram
20's / 25's / 50's
greater/ smaller than
estimate
multiple 4's 8's

statistics

bar chart
data scale
bar graph
popular

time

analogue clock
roman numerals
12 / 24 hour clock
a.m/p.m
morning/afternoon
noon/midnight
leap year
noon
hand
second
start time/end time
convert
year
month

Year groups will revisit previous vocabulary where necessary

Our Year 4 mathematicians should...

Autumn	Spring	Summer
Number and Place Value - Count backwards through zero to include negative numbers - Count in multiples of 6, 7, 25 and 1000 - Find 1000 more or less than any given number Addition and Subtraction - Use both mental methods to add and subtract increasingly large numbers using knowledge of their number facts, compensation and redistribution - Add and subtract 4-digit numbers using formal column methods where appropriate Multiplication and Division - Recall and use multiplication and division facts for the 3, 4 and 8 tables up to 12 x - Begin to count up in 6s and 7s up to 12 x - Use place value, known and derived facts to multiply and divide mentally by 10, 100, 1 and 0. Fractions - Recognise and show, using diagrams, families of common equivalent fractions - Add and subtract fractions with the same denominator Geometry - Compare and classify (including congruence) geometric shapes, including quadrilaterals, triangles, trapeziums and rhombus based on their properties and sizes. Measurement - Measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m - Find the area of rectilinear shapes by counting squares - Convert between different units of measure (km to m)	Number and Place Value - Count in multiples of 6, 9, 7, 25 and 1000 - Compare and order numbers beyond 1000 Addition and Subtraction - Estimate and use inverse to check answers to calculations - Recognise the most efficient methods Multiplication and Division - Recall and use multiplication and division facts for the 6 and 7 tables - Fluently count in 9s up to 12 x 9 - Fluently count in 11s up to 12 x 11 - Recognise and use factor pairs and commutativity in mental calculations - Use place value, known and derived facts to multiply and divide mentally, including multiplying by 0 and 1 and multiplying three numbers together - Find the effect of multiplying a number with up to 2 decimal places by 10 and 100, identifying the value of the digits in the answer as ones, tenth and hundredths. Fractions and Decimals - Divide a 1-digit or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths - Count up and down in hundredths and recognise that hundredths arise from dividing an object, number or quantity into 100 equal parts - Recognise and write decimal equivalents of any number of tenths or hundredths Statistics - Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs - Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs Geometry - Complete a simple symmetric figure with respect to a specific line of symmetry - Identify acute and obtuse angles and compare and order angles up to two right angles by size	Number and Place Value - Read Roman numerals to 100 - Round numbers to the nearest 10, 100 or 1000 Addition and Subtraction - Solve addition and subtraction two step problems in a variety of contexts deciding which operations and methods to use and why. Multiplication and Division - Recall multiplication and division facts for multiplication tables up to X12 - Multiply 2-digit and 3-digit numbers by 1-digit numbers using formal written method - Divide 2-digit and 3-digit numbers by a 1-digit number using formal written method beginning to use remainders Fractions and Decimals - Round decimals with one decimal place to the nearest whole number - Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ - Compare numbers with the same number of decimal places up to two decimal places. Geometry - Describe positions on a 2D grid as coordinates in the first quadrant - Identify lines of symmetry in 2D shapes presented in different orientations - Describe movements between positions as translations of a given unit to the left/right/up/down - Plot specified points and draw sides to complete a given polygon Measurement - Read and write and convert between analogue and digital 12 and 24 hour clocks - Convert between different units of measure (hour to min) - Compare durations of events – calculate the time taken by particular events or tasks

Vocabulary

addition and subtraction

round to the nearest 100, 1000
calculate mentally

decimals

ones
tenths
hundredths
mixed number
decimal, decimal point
number pattern
__ones and __tenths as a decimal
is __point__
greater than/less than
round down/round up
approximately equal to

division

giving
quotient
dividend
divided by
inverse
remainder
odd, even
subtract
1's 10's 100's
repeated subtraction
unit
bar model

fractions

decimal equivalent
hundredths
number line
count back/on count in 100ths 10ths 8ths
mixed number, whole number
proper fraction, improper fraction
thirds, quarters, fifths
compare, simplify
add, sum
> < =
greater/less than
equal to
subtract

geometry- position, direction and movement

clockwise
anti-clockwise
quarter turn
half turn
three- quarter turn
right angle turn
units x-axis y-axis
co-ordinates vertex
isosceles triangle
right-angled triangle
scalene triangle
translation
rotate
flip

geometry- properties of shape

isosceles
equilateral
scalene
trapezium
rhombus
parallelogram
kite
quadrilateral
parallel
lines of symmetry
regular

measurement

area
metres
kilometres
estimate
quadrilateral
rectangle
square
triangle
square units
half square
surface
length & breadth

money

estimate *(revisit previous vocabulary where necessary)*

multiplication

count on
3's 6's 7's 9's
multiple
repeated addition
add
commutativity
commutative
zero
decrease
partition
place value
10/100 times greater
multiple of 10, 100
method
1's 10's 100's

number and place value

negative numbers 1000 more / less
thousands
numbers / words to 1000
1000's place rounding nearest 1000
exactly half way
closer to
round to the nearest 10, 100, 1000
approximately equal to
roman numerals

statistics

time graph
pictogram
bar graph
information scale
x and y axes
greatest, more
fewer, fewest
highest, lowest
line graph
predict
increase, decrease
least
table

time

(revisit previous vocabulary where necessary)

Year groups will revisit previous vocabulary where necessary

Our Year 5 mathematicians should...		
Autumn	Spring	Summer
Number and Place Value - Count forward and backwards in steps of powers of 10 for any given number up to 1,000 - Interpret negative numbers in context, count forwards and backwards with positive and negative numbers, including through zero - Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit Addition and Subtraction - Add and subtract numbers mentally with increasingly large numbers - Add and subtract whole numbers with more than 4 digits, including using formal column methods Multiplication and Division - Fluently recall multiples of 12 in any order - Fluently recall multiples of all times tables up to 12 x 12 - Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers - Recognise and use square and cube numbers and use notation squared² and cubed³ - Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers and establish whether a number up to 100 is prime and recall prime numbers to 19 - Solve problems involving multiplication and division using knowledge of factors and multiples, squares and cubes - Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Fractions - Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths - Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number - Compare and order fractions whose denominators are all multiples of the same number Measurement - Measure and calculate the perimeter of composite rectilinear shapes in cm and m - Calculate and compare the area of rectilinear (including squares), and including using standard units, square cm (cm²) and square m (m²) and estimate the area of irregular shapes Geometry - Identify, describe and represent the position of a shape following a reflection or translation using the appropriate language and know that the shape has not changed - Use the properties of rectangles to deduce related facts and find missing lengths and angles	Number and Place Value - Count forward and backwards in steps of powers of 10 for any given number up to 1,000 - Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 or 100,000 Addition and Subtraction - Use rounding to check answers and determine, in the context of the problem, levels of accuracy Multiplication and Division - Multiply and divide numbers mentally drawing upon known facts - Multiply numbers up to 4-digits by a 1-digit or 2-digit number using a formal written method, including short multiplication for 2-digit numbers - Divide numbers up to 4-digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context - Solve problems involving addition, subtraction, multiplication and a combination of these, including understanding of the equals sign Fractions and Decimals - Add and subtract fractions with the same denominator, and denominators that are multiples of the same number - Multiply proper fractions and mixed numbers by whole numbers - Count up and down in thousandths and recognise that thousandths arise from dividing an object, number or quantity into 1000 equal parts - Read and write decimal numbers as fractions eg, $0.71 = \frac{71}{100}$ - Round decimals with two decimal places to the nearest whole number and to one decimal place - Read, write, order and compare numbers with up to three decimal places - Solve problems involving number up to three decimal places Geometry - Distinguish between regular and irregular polygons based on reasoning about equal sides and angles - Identify 3D shapes, including cubes and other cuboids, from their 2D representations	Number and Place Value - Read Roman numerals to 1000 and recognise years written in Roman numerals Addition and Subtraction - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Multiplication and Division - Solve problems involving multiplication and division including scaling by simple fractions and problems involving simple rates Fractions, Decimals and Percentages - Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 - Recognise the percent symbol (%) and understand that percent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal - Mentally add and subtract tenths and one-digit whole numbers and tenths Geometry - Know angles are measured in degrees - Estimate and compare acute, obtuse and reflex angles - Identify angles at a point on a straight line and $\frac{1}{2}$ a turn as 180° - Identify angles at a point and one whole turn as 360° - Identify multiples of 90° - Draw given angles and measure them in degrees Statistics - Complete, read and interpret information in tables, including timetables - Solve comparison, addition and difference problems using information presented in a line graph Measurement - Estimate volume (eg, using 1cm³ blocks to build cuboids) and capacity (eg, using water) - Convert between different units of metric measure – km/m, cm/m, cm/mm, g/kg, l/ml - Solve problems involving converting between units of time - Use approximate equivalences between metric units and common imperial units such as inches, pounds and pints

Vocabulary

addition and subtraction

round to the nearest 10, 000
hundred
thousands

decimals

thousandths
smaller than
greatest
smallest
equivalent value
total
difference
decimal place
round

division

1000s
partition

fractions

thousandths
mixed number
fractions
per cent %
improper fractions
proper fractions
division
equal pieces/parts
hundredth
compare, order
simplify
greatest
smallest

geometry- position, direction and movement

Reflection
x-coordinate
y-coordinate
translate
reflect
mirror line
image
horizontal
vertices

geometry- properties of shape

regular polygon
irregular polygon
reflex angles
degrees
protractor
vertex
diagonal
internal angle
external angle
pentagon
decagon

measurement

metric units
imperial units
square centimetres
square meters
inch foot/feet
yard
mile
parallel
perpendicular
right angle
scale

money

(revisit previous vocabulary where necessary)

multiplication

multiples
factors
prime numbers
prime factors
composite numbers
common factor
even/odd number
square number
cubed number
squared ²,
cubed ³
estimation

number and place value

million
roman numerals to 1000 – m
ten/one hundred thousands
descending / ascending
approximate number
round to the nearest 10, 000
round to the nearest 100,000

ratio and proportion

per cent
percentage
fraction
hundredth
decimal

statistics

line graph
slope
axis, axes
increased
decreased
horizontal
key
table
trend

time

duration
(revisit previous vocabulary where necessary)

Year groups will revisit previous vocabulary where necessary

Our Year 6 mathematicians should...

Autumn	Spring	Summer
Number and Place Value - Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit - Round any whole number to the required degree of accuracy Addition and Subtraction - Perform mental calculations including with mixed operations and large numbers - Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy Multiplication and Division - Identify common factors, common multiples and prime numbers - Perform mental calculations, including with mixed numbers and large numbers - Calculate using short multiplication and division, using knowledge of factors to solve 4-digit by 2-digit questions Fractions - Compare and order fractions including mixed number and improper fractions - Use common factors to simplify fractions, use common multiples to express fractions in the same denomination - Recall and use equivalences between simple fractions, decimals and percentages, including different contexts - Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions - Multiply simple pairs of proper fractions, writing the answer in the simplest form - Divide proper fractions by whole numbers - Associate a fraction with division to calculate decimal fraction equivalents, for simple fractions - Multiply simple pairs of proper fractions, writing the answer in the simplest form Geometry - Describe positions on the full coordinate grid – all four quadrants - Draw and translate simple shapes on the coordinate grid and reflect them in the axes	Number and Place Value - Use negative numbers in context and calculate intervals across zero Addition and Subtraction - Use knowledge of the order of operations to carry out calculations involving the four operations Multiplication and Division - Multiply multi-digit numbers up to 4-digits by a 2-digit whole number using the formal written method for short multiplication - Divide numbers up to 4-digits by a 2-digit whole numbers using the formal written method of long division and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context Fractions, Decimals and Percentages - Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places - Divide proper fractions by whole numbers - Associate a fraction with division to calculate decimal fraction equivalents, for simple fractions - Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places Algebra - Express missing number problems algebraically and use simple formulae - Find pairs of numbers that satisfy number sentences with two unknowns - Generate and describe linear number sequences - Enumerate possibilities of combinations of two variables Measurement - Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm^3 and m^3, and extending to other units such as mm^3 and km^3 - Convert between miles and km - Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from smaller units of measure to a larger unit, and vice versa, using decimal notation to three decimal places - Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate - Recognise when it is possible to use formulae for area and volume of shapes Ratio and Proportion - Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts - Solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison Geometry - Recognise, describe and build simple 3D shapes, including making nets	Number and Place Value - Solve number and practical problems that involve all other year group number and place value objectives Addition and Subtraction - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Multiplication and Division - Solve multiplication and division multi-step problems in contexts, deciding which operations and methods to use and why Fractions and Decimals - multiply one-digit numbers with up to two decimal places by whole numbers - use written division methods in cases where the answer has up to two decimal places - solve problems which require answers to be rounded to specified degrees of accuracy - recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Statistics - Interpret and construct pie charts and line graphs and use them to solve problems - Calculate and interpret the mean, mode and median averages Ratio and Proportion - Solve problems involving similar shapes where the scale factor is known or can be found - Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples Geometry - Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons - Draw 2D shapes given dimensions and angles - Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles - Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius Measurement - Recognise that shapes with the same areas can have different perimeters and vice versa - Calculate the area of parallelograms and triangles

addition and subtraction

operation
calculation
mixed operation
bracket
negative number

algebra

formulae
linear number
sequences
algebraically
variables

decimals

decimal point/place
1s
10ths
100ths
1000ths
place value
simplest form

division

operation
calculation
mixed operation
long division
calculation bracket

fractions

simplify
common factor
in its simplest form
compare
bar model
lowest common multiple
common denominator
greater than
add, subtract
commutative
multiply, divide
quotient product

geometry- position, direction and movement

quadrants
co-ordinate plane
negative number
the origin
co-ordinates
x-coordinate
y-coordinate reflection

geometry- properties of shape

radius
diameter
circumference
dimensions
vertically opposite angles
ratio
radius
scale
triangular prism
net
triangular based pyramid
square based pyramid

measurement

miles
formulae
parallelograms
 m^3 cm^3 mm^3 km^3

money

(revisit previous vocabulary where necessary)

multiplication

multi-digit number
operation
calculation
partition
expression
common multiple
lowest common multiple
greatest common factor

number and place value

10 million
prime numbers
composite numbers
negative number
round to the nearest :-
10, 100, 10,000
100, 000
1,000,000

ratio and proportion

relative size
missing values
integer
multiplication
integer division
percentages
scale factor
proportionality
percentage change
round
greater than
less than
ratio

statistics

pie chart
bar model
average
mean
mode
median
equal parts
pie chart
segment
percentage
average speed

time

(revisit previous vocabulary where necessary)

Year groups will revisit previous vocabulary where necessary